

July 20, 1936

PROGRESS REPORT ON BONE OIL TESTS FOR SCREW WORM CONTROL
VALDOSTA, GEORGIA

(Dr. McGovern)

Material:

On June 26, 1936, a one gallon sample of bone oil, sp. gr. 0.9 to 0.98 approximately, was obtained from the First Texas Chemical Company, Dallas, Texas.

Procedure:

This material was tested as a repellent on wounds on goats that had been infested with C. americana larvae. The bone oil was applied twice a week, on Monday and Thursday. The wounds and surrounding skin and hair were thoroughly covered with the bone oil which was applied with a paint brush.

This material was also tested as a larvicide by applying it to an infested wound on a goat. This wound contained nearly mature C. americana larvae.

Results to date:

Goat 129 had a wound 1 x 1 inch on the left shoulder. This wound had been treated with a larvicide and the dead larvae removed.

June 29 2:00 P. M. Bone oil applied.

July 2 11:00 A. M. Second-instar C. americana larvae from one or two egg masses in the wound. Benzol and bone oil applied.

July 6 11:00 A. M. Second- and third-instar C. americana larvae from three egg masses in the wound. Benzol and bone oil applied.

PROGRESS REPORT ON BONE OIL TESTS FOR SCREW WORM CONTROL
VALMISTA, GEORGIA

(Dr. McGovern)

Material:

On June 26, 1936, a one gallon sample of bone oil, sp. gr. 0.8 to 0.98 approximately, was obtained from the First Texas Chemical Company, Dallas, Texas.

Procedure:

This material was tested as a repellent on wounds on goats that had been infested with C. americana larvae. The bone oil was applied twice a week, on Monday and Thursday. The wounds and surrounding skin and hair were thoroughly covered with the bone oil which was applied with a paint brush.

This material was also tested as a larvicide by applying it to an infested wound on a goat. This wound contained nearly mature C. americana larvae.

Results to date:

Goat 129 had a wound 1 x 1 inch on the left shoulder. This wound had been treated with a larvicide and the dead larvae removed.

Date	Time	Material	Remarks
June 29	2:00 P. M.	Bone oil applied.	
July 2	11:00 A. M.	Second-instar <u>C. americana</u> larvae from one or two egg masses in the wound. Benzol and bone oil applied.	
July 6	11:00 A. M.	Second- and third-instar <u>C. americana</u> larvae from three egg masses in the wound. Benzol and bone oil applied.	

July 9 11:00 A. M. No larvae in wound. Bone oil applied.

July 13 11:00 A. M. Third instar C. americana larvae from two egg masses in the wound. Benzol and bone oil applied.

July 16 10:00 A. M. Fresh C. americana egg mass on wound. No larvae visible in wound. Bone oil applied covering the egg mass.

July 20 11:00 A. M. A few (about 5) nearly mature and many second-instar C. americana larvae from at least one egg mass in wound. Benzol and bone oil applied.

Five goats with wounds comparable with Goat 129 were treated with pine tar oil on the same date as Goat 129 and were kept in the same pasture with him. None of these became reinfested. An untreated check animal in this same group did not become reinfested.

Goat 151 had a wound $1-1/2 \times 3/4$ inches on the left shoulder that had been infested with C. americana larvae. Bone oil was applied on July 6, 9, 13, 16 and 20. No reinfestation occurred. On July 9 the wound was very red and on July 13 the wound was dark red with a little blood on it.

Five goats with wounds comparable with Goat 151 were treated with pine tar oil on the same dates as Goat 151 and were kept in the same pasture with her. Three of these goats became reinfested, as follows:

Goat 141 had some third-instar C. americana larvae on July 9 and some second-instar larvae on July 13 and five almost mature larvae on July 16.

Goat 144 had a reinfestation of early third-instar C. americana larvae on July 9.

Goat 145 had a reinfestation of second- and third-instar C. americana larvae from two egg masses on July 9. The wounds treated with pine tar

July 9 11:00 A. M. No larvae in wound. Bone oil applied.

July 13 11:00 A. M. Third instar C. americana larvae from two egg masses in the wound. Benzol and bone oil applied.

July 16 10:00 A. M. Fresh C. americana egg mass on wound. No larvae visible in wound. Bone oil applied covering the egg mass.

July 20 11:00 A. M. A few (about 5) nearly mature and many second-instar C. americana larvae from at least one egg mass in wound. Benzol and bone oil applied.

Five goats with wounds comparable with Goat 129 were treated with pine tar oil on the same date as Goat 129 and were kept in the same pasture with him. None of these became reinested. An untreated check animal in this same group did not become reinested.

Goat 151 had a wound $1\frac{1}{2} \times 3\frac{1}{4}$ inches on the left shoulder that had been treated with C. americana larvae. Bone oil was applied on July 8, 9, 13, 16 and 20. No reinestation occurred. On July 9 the wound was very red and on July 13 the wound was dark red with a little blood on it.

Five goats with wounds comparable with Goat 151 were treated with pine tar oil on the same date as Goat 151 and were kept in the same pasture with her. Three of these goats became reinested, as follows:

Goat 141 had some third-instar C. americana larvae on July 9 and some second-instar larvae on July 13 and five almost mature larvae on July 16.

Goat 144 had a reinestation of early third-instar C. americana larvae on July 9.

Goat 146 had a reinestation of second- and third-instar C. americana larvae from two egg masses on July 9. The wounds treated with pine tar

oil that became reinfested were slightly larger than the one that received bone oil. The untreated check animal in this group did not become reinfested. ~~is report is submitted while the repellent tests are in progress.~~

~~Late~~ Goat 171 had a wound $3/4 \times 1/4$ inch on the left shoulder that had been infested with C. americana larvae. Bone oil was applied on July 13, 16 and 20. No reinfestation occurred.

Four goats with wounds comparable with Goat 171 were treated with pine tar oil on the same dates as Goat 171 and were kept in the same pasture with her. None of these four animals nor the untreated check in this group became reinfested. One of these animals, however, had two fresh C. americana egg masses on July 16 but the larvae did not become established.

Three cc of bone oil were applied to a wound infested with nearly mature C. americana larvae. After treatment 113 larvae dropped from the wound and 106 flies emerged from these larvae. The untreated animal in this group produced 152 flies and ^{treatments} benzol/with or without a cotton plug produced no flies after treatment.

Summary:

Bone oil was applied as a repellent to shoulder wounds on three goats. One of these goats became reinfested with C. americana larvae four times. The other two animals did not become reinfested. Fourteen goats with similar wounds were treated with pine tar oil and kept in the same pasture with the goats treated with bone oil. One of these goats became reinfested twice and two additional goats became reinfested once each. The other 11 animals did not become reinfested.

Three untreated check animals did not become reinfested.

oil that became reinfested were slightly larger than the one that received bone oil. The untreated check animal in this group did not become reinfested.

Goat IV had a wound $3\frac{1}{4} \times 1\frac{1}{4}$ inch on the left shoulder that had been infested with C. americana larvae. Bone oil was applied on July 12, 13 and 14. No reinfestation occurred.

Four goats with wounds comparable with Goat IV were treated with pine tar oil on the same dates as Goat IV and were kept in the same pasture with her. None of these four animals nor the untreated check in this group became reinfested. One of these animals, however, had two fresh C. americana eggs masses on July 16 but the larvae did not become established.

Three of bone oil were applied to a wound infested with nearly mature C. americana larvae. After treatment 113 larvae dropped from the wound and 108 flies emerged from these larvae. The untreated animal in this group produced 132 flies and benzol^{treatments} with or without a cotton plug produced no flies after treatment.

Summary:

Bone oil was applied as a repellent to shoulder wounds on three goats. One of these goats became reinfested with C. americana larvae four times. The other two animals did not become reinfested. Fourteen goats with similar wounds were treated with pine tar oil and kept in the same pasture with the goats treated with bone oil. One of these goats became reinfested twice and two additional goats became reinfested once each. The other 11 animals did not become reinfested.

Three untreated check animals did not become reinfested.

Bone oil applied to a wound infested with C. americana larvae allowed 106 flies to emerge from the wound.

This report is submitted while the repellent tests are in progress.
Later developments may change the results.

July 20, 1936

Bone oil applied to a wound infested with C. americana larvae allowed
100 flies to emerge from the wound.

This report is submitted while the repellent tests are in progress.
Later developments may change the results.

Summary
The repellent tests are in progress.

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